

CLAIMS

What is claimed is:

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1. A method for detecting fraud when facilitating a payment transaction over a
global wide area network, the method comprising:
receiving a sale information;
receiving a payment information from a buyer;
analyzing a transaction information for fraud; and
if the analyzing indicates fraud, communicating an enhanced transaction information to
a human for fraud analysis.

2. The method of Claim 1 wherein the sale information is received from a seller,
and the method further comprises:
communicating an invoice to a buyer.

3. The method of Claim 1 wherein the sale information is received from the buyer,
and the method further comprises:
communicating a sale confirmation request to the seller.

4. The method of Claim 1 further comprising:
performing simple screening of the transaction information.

5. The method of Claim 4 wherein performing simple screening comprises at least
one of:
determining whether a financial account specified as part of the payment information is
on a list of known fraudulent financial account numbers;

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- 5 determining whether the name of the buyer or the name of the seller is on a list of
- 6 known fraudulent users;
- 7 determining whether a shipping address specified as part of the payment information is
- 8 on a list of known fraudulent addresses;
- 9 determining whether a billing address specified as part of the payment information is on
- 10 a list of known fraudulent addresses;
- 11 determining whether a billing address specified as part of the payment information is on
- 12 a list of known fraudulent addresses;
- 13 determining whether an email address of the buyer or the seller is on a list of known
- 14 fraudulent email addresses; and
- 15 determining whether an Internet protocol (IP) address of the buyer or the seller is on a
- 16 list of known fraudulent IP addresses.

1 6. The method of Claim 1 further comprising:
2 seeking approval from a financial institution based on the payment information.

1 7. The method of Claim 6 wherein seeking approval comprises:
2 sending a request for approval that comprises at least an account information extracted
3 from the payment information and an amount information to a financial institution;
4 receiving from the financial institution a response to the request;
5 rejecting the payment transaction or continuing with the payment transaction responsive to the
6 response.

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1 8. The method of Claim 1 wherein analyzing comprises:
2 performing rule-based analyses.

9. The method of Claim 8 wherein performing rule-based analyses comprises:
applying a plurality of rules to the transaction information such that a score for the
payment transaction is incremented when one of the rules is violated.

10. The method of Claim 9 wherein performing rule-based analyses comprises
further comprises:
creating the enhanced transaction information if the score exceeds a predefined
threshold such that the enhanced transaction information comprises a tracking number, the
score, and a violated rule information.

11. The method of Claim 9 wherein applying comprises:
incrementing the score responsive to a numeric value assigned to the rule violated.

12. The method of Claim 9 wherein the plurality of rules comprise at least one of a
plurality of suspect data rules and a plurality of velocity rules.

13. The method of Claim 12 wherein the plurality of suspect data rules comprise at
least some of:
comparison of a shipping address with a directory of known real addresses;
comparison of a shipping address with a list of addresses implicated in prior possibly
fraudulent transactions;
comparison of a billing address with a directory of known real addresses;
comparison of a billing address with a list of addresses implicated in prior possibly
fraudulent transactions.

1 14. The method of Claim 12 wherein the plurality of velocity rules comprise at least
2 some of:

3 determining whether a first number of transactions involving the seller exceeds a first
4 predefined threshold for a first predefined time period;

5 determining whether a second number of transactions involving the buyer exceeds a
6 second predefined threshold for a second predefined time period;

7 determining whether a first total dollar amount for a first plurality of transactions
8 involving the buyer exceeds a third predefined threshold for a third predefined time period;

9 determining whether a second total dollar amount for a second plurality of transactions
10 involving the seller exceeds a fourth predefined threshold for a fourth predefined time period;

11 determining whether a third total dollar amount for a specified financial account exceeds
12 a fifth predefined threshold for a fifth predefined time period;

13 determining whether a third number of transactions involving the specified financial
14 account exceeds a sixth predefined threshold for a sixth predefined time period.

1 15. The method of Claim 12 wherein the plurality of velocity rules comprise at least
2 some of:

3 determining whether a financial account specified as part of the payment information
4 has exceeded a predetermined acceptable number of times used over a predetermined period of
5 time;

6 determining whether a financial account specified as part of the payment information
7 has exceeded a predetermined acceptable number of times used over a predetermined number of
8 transactions with the seller;

9 determining whether a financial account specified as part of the payment information
10 has exceeded a predetermined acceptable number of times used over a predetermined number of
11 transactions with a payment facilitator system.

1 16. The method of Claim 1 wherein communicating an enhanced transaction
2 information comprises sending an email message to at least one of a plurality of human fraud
3 investigators.

1 17. The method of Claim 1 further comprising:
2 if the analyzing indicates fraud, notifying the buyer and/or a seller that the payment
3 transaction is on hold pending the outcome of a fraud investigation.

1 18. The method of Claim 17 wherein notifying comprises:
2 sending an email message to the buyer and/or the seller.

1 19. A system comprising:
2 a first computer supporting communications over a wide area network by a
3 buyer;
4 a second computer supporting communications over the wide area network by a
5 seller;
6 a third computer supporting communications over the wide area network and
7 executing software that facilitates a payment transaction between the buyer and the seller such
8 that the third computer
9 analyzes the payment transaction for fraud by applying a plurality of
10 rules and incrementing a score for the payment transaction for each of the
11 plurality of rules that is violated, and
12 if the score exceeds a predefined threshold, communicates an
13 information about the payment transaction to a human fraud investigator.

1 20. The system of Claim 19 further comprising:
2 a fourth computer capable of communications with the third computer and allowing the
3 human fraud investigator to communicate with the third computer.

1 21. The system of Claim 20 wherein the third computer is coupled to the fourth
2 computer via a dedicated communications line.

1 22. The system of Claim 20 wherein the third computer communicates with the
2 fourth computer over the wide area network.

1 23. The system of Claim 19 further comprising:
2 a fifth computer capable of communications with the third computer and responding on
3 behalf of a financial institution to a request for authorization of the payment transaction initiated
4 by the software executing on the third computer.

1 24. The system of Claim 23 wherein the third computer is coupled to the fifth
2 computer via a dedicated communications line.

1 25. The system of Claim 23 wherein the third computer communicates with the fifth
2 computer over the wide area network.

1 26. The system of Claim 19 wherein the wide area network is the Internet.

1 27. A machine readable medium having stored thereon instructions which when
2 executed by a processor cause the machine to perform operations comprising:
3 receiving a sale information;

4 receiving a payment information from a buyer;
5 analyzing a transaction information for fraud; and
6 if the analyzing indicates fraud, communicating an enhanced transaction information to
7 a human for fraud analysis.

1 28. The machine readable medium of Claim 27 wherein the instructions cause the
2 machine to perform operations further comprising:
3 performing simple screening of the transaction information.

1 29. The machine readable medium of Claim 28 wherein performing simple
2 screening comprises at least one of:
3 determining whether a financial account specified as part of the payment information is
4 on a list of known fraudulent financial account numbers;
5 determining whether the name of the buyer or the name of the seller is on a list of
6 known fraudulent users;
7 determining whether a shipping address specified as part of the payment information is
8 on a list of known fraudulent addresses;
9 determining whether a billing address specified as part of the payment information is on
10 a list of known fraudulent addresses;
11 determining whether a billing address specified as part of the payment information is on
12 a list of known fraudulent addresses;
13 determining whether an email address of the buyer or the seller is on a list of known
14 fraudulent email addresses; and
15 determining whether an Internet protocol (IP) address of the buyer or the seller is on a
16 list of known fraudulent IP addresses.

1 30. The machine readable medium of Claim 27 wherein the instructions cause the
2 machine to perform operations further comprising:
3 seeking approval from a financial institution based on the payment information.

1 31. The machine readable medium of Claim 30 wherein seeking approval
2 comprises:
3 sending a request for approval that comprises at least an account information extracted
4 from the payment information and an amount information to a financial institution;
5 receiving from the financial institution a response to the request;
6 rejecting the payment transaction or continuing with the payment transaction responsive to the
7 response.

1 32. The machine readable medium of Claim 27 wherein analyzing comprises:
2 performing rule-based analyses.

1 33. The machine readable medium of Claim 32 wherein performing rule-based
2 analyses comprises:
3 applying a plurality of rules to the transaction information such that a score for the
4 payment transaction is incremented when one of the rules is violated.

1 34. The machine readable medium of Claim 33 wherein performing rule-based
2 analyses further comprises:
3 creating the enhanced transaction information if the score exceeds a predefined
4 threshold such that the enhanced transaction information comprises a tracking number, the
5 score, and a violated rule information.

1 35. The machine readable medium of Claim 33 wherein applying comprises:
2 incrementing the score responsive to a numeric value assigned to the rule violated.

1 36. The machine readable medium of Claim 33 wherein the plurality of rules
2 comprise at least one of a plurality of suspect data rules and a plurality of velocity rules.

1 37. The machine readable medium of Claim 27 wherein communicating an
2 enhanced transaction information comprises sending an email message to at least one of a
3 plurality of human fraud investigators.

1 38. The machine readable medium of Claim 27 wherein the instructions cause the
2 machine to perform operations further comprising:

3 if the analyzing indicates fraud, notifying the buyer and/or a seller that the payment
4 transaction is on hold pending the outcome of a fraud investigation.

1 39. The machine readable medium of Claim 38 wherein notifying comprises:
2 sending an email message to the buyer and/or the seller.